ESSAYS
I-XXX

ARTHUR SEARLE

41 Concord Avenue
Cambridge, Mass., Jan. 25, 1911.

Dear Sir,

This note accompanies a copy of some essays, which I have pleasure in presenting to the Library of the University of California.

Yours truly,
Arthur Searle

To the Librarian of the
University of California
Berkeley, California.

ESSAYS

I-XXX

BY

ARTHUR SEARLE

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ESSAYS

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I

Writing is certainly a harmless and unobtrusive occupation for old age; but it sometimes leads to printing, the expediency of which is always doubtful. If what has been printed is never read, there has been a waste of labor and materials; if readers are found, their time may be wasted. For this, however, they must be chiefly responsible. The responsibility which the writer cannot escape should warn him at least to be brief, and, in particular, to omit all apologies.

An opinion occasionally expressed, in which I concur, is that men who have thought seriously may properly leave behind them some record of their conclusions, whether printed or not. If they think that they have made any discoveries which the world will be the better for knowing, they may state them at any time of life; this is perhaps most likely to occur while they are young. But if they merely

intend to show how far they agree with any existing opinions, they can do so to the best advantage at an age when fixed habits of thought combine with want of time for further changes to indicate the probability that their conclusions are final, so far as they are concerned.

No pretence to originality is made in the pages which follow. But the thoughts expressed in them are not mere repetitions of those entertained by previous thinkers: they result from independent reflection, and the coincidences with the work of former writers which will doubtless appear below are to be regarded as confirmations, not as plagiarisms.

For the sake of brevity, my statements of opinion will frequently have the form of assertions, which must not be understood as claiming any authority, or disputing the right of others to believe differently. I am not arguing as an advocate, or deciding as a judge, but voting as a juryman or an elector upon such questions as I have had occasion to consider; while the neglect of topics which others may think equally fundamental will perhaps make my conclusions seem fragmentary and unsubstantial.

II

On the present occasion, I am to attempt the expression of thought by means of language; and the question whether thought can be otherwise made distinct to ourselves or communicated to others does not concern us for the present. It is generally admitted that language, like fire, is a good servant, but a bad master, and that it is especially likely to obtain an undue mastery in those discussions relating to the nature of our primary convictions which have always been interesting to civilized men, however imperfect their results may appear. The immediate object of language is to state facts and to express desires relating to the external world. Even this task it accomplishes rather vaguely, and its metaphorical terms for our mental proceedings still further embarrass our attempts to discuss them. Metaphor and analogy may easily be carried too far, and may mislead us; so much every one is willing to grant. But he is also disposed to hold that his neighbor, and not he, has been misled. I shall not be able to prove my success in the control of language to be

greater than that of others whom I may regard as carried away by their own words.

The invention of new technical terms does little to make language a more satisfactory implement. Such terms may indeed abbreviate our reasonings, but their validity cannot exceed that of the more familiar phrases which define them. Nor will it avail us to strive for precision of statement at the expense of perspicuity. When we are to make an obscure topic more distinct to ourselves, if not to others, our language must not cast additional darkness upon what can at best only be dimly discerned. And yet we must not conceal a difficulty by words which, although simple in appearance, are really only denials, not statements, of the problems before us. How far it is possible to comply with such precepts for the use of language can be learned only by experience.

III

All men will probably admit, as an indisputable proposition, the assertion that something is happening, going on, or taking place. But to obtain universal assent to this proposition, we must introduce ideas which we are not

yet ready to discuss, by limiting what happens to feeling, intention, and thought. Here many will add that they are incapable of separating this conception from another, which insists upon the existence of something which does not happen, but which feels, intends, and thinks. This incapacity, to my mind, is an instance of the control of thought by language, above mentioned; and the thinkers whom I follow maintain that the separation of the two conceptions is possible. Existence, then, to us, implies only what can happen, not what is.

But a perfectly monotonous existence, like that which Buddhist doctrines are reported to describe as a state of final blessedness for the just, is not easily to be distinguished from a state in which nothing happens. Our notion of existence seems to require change, and this calls upon us again to anticipate the introduction of a new topic, that of likeness and unlikeness, which we may naturally wish to postpone.

If we are to use language at all, we must expect it continually to suggest to us complex ideas, for the discussion of which we are at the moment unprepared. It would be as useless as inconvenient to avoid phrases in which per-

sonal pronouns occur, because we have not yet considered what personal pronouns mean. Words which imply change and time must be employed in any attempt to indicate still simpler subjects of thought, and frequent references to an external world will occur in a treatise the professed subjects of which are purely mental. Many, doubtless, will be ready to say that under such conditions no value can be ascribed to any conclusions relating to the foundations of our knowledge. All who think so are right in abstaining from the search for such conclusions.

In my early years, I was once to some extent instructed as well as amused by watching a hen in pursuit of grasshoppers. Fixing her attention on one particular grasshopper, she followed it until it had become too tired to go farther, regardless of all the others which sprang up between her and that which she was chasing. If we can succeed at all in the hunt for clear conceptions over the field of language, it must be by the temporary neglect of all but that which we are seeking at the moment.

In the present case, we will endeavor to exclude from the consideration of the vague notion of existence with which we have begun all

suggestions made to us by our own words, and to choose for ourselves that course of thought which best promises clearness and simplicity.

IV

THE notion of parts composing aggregates, and aggregates composed of parts, appears to me to be less in need of definition by additional notions than any other which I can discover. This is the origin of all mathematical inquiry, and mathematics is commonly accepted as a comparatively distinct body of thought. Our chosen terms are mutually dependent; to imagine a part we must also imagine that which includes it, and to imagine an aggregate is to imagine something made up of parts. Possibly some may hold that this is equally true of thought and the thinker. In a certain sense, as will appear below, I can agree with them; but not as I conceive the statement to be usually understood. No argument upon the question seems practicable, and every one must decide it for himself.

Existence, regarded as an aggregate, consists of parts, each of which may itself be regarded as an aggregate, and this process

may be indefinitely continued. Here we obtain our first suggestion of the idea of an orderly universe, which will of course be continually recurring as we proceed. Can any interdependence of ideas appertain to a chaos? Our minds, developed under a reign of law, may perhaps regard chaos as divisible into parts; but no such idea, and presumably no idea at all, can easily be supposed to originate in chaos itself. This, however, is a merely fanciful speculation, which must not be allowed to detain us longer.

One part of existence is the present; the present, taken as an aggregate, may be indefinitely subdivided, and this process ultimately results in the total extinction of the present, as every one perceives. To use a mathematical term, easily understood, the integration of an indefinite number of parts is requisite in order to constitute what we call a present event. Consciousness is a term too vague and general to allow us definitely to declare it equivalent to integrated existence; but disintegrated existence cannot be regarded as conscious, and consciousness may be greater or less according to its degree of integration. In the language of mathematics, the term opposed to integra-

tion is differentiation; but disintegration is an expression which is probably more generally intelligible.

Memory, properly speaking, involves a recognition of the past, and anticipation a recognition of the future. If we regard consciousness as a compound of memory and anticipation, we must use these terms in a special sense, excluding such recognitions. This will furnish us with the idea of a conscious present, composed of an unrecognized memory and an equally unrecognized, and probably less extensive, anticipation, like a wave about to break, and steeper toward the shore than toward the sea.

In this view of the subject, consciousness may gradually diminish and finally disappear in disintegration, while we shall be unable to fix any distinct boundary between a conscious and an unconscious condition. Allowing ourselves here to admit the idea of an external world, we may imagine animals of various kinds to have various degrees of consciousness, without finding any line of ultimate separation between them and vegetables, in which we consider consciousness altogether absent; that is, we regard their existence as disintegrated.

According to one school of philosophy, no animal but man is conscious; but this theory is generally taken for an unwarranted expression of the pride of human nature.

On the other hand, a consciousness extended to embrace a past and a future eternity, so that everything shall be present, is no longer consciousness at all, however gradually we may regard it as approached. It is something wholly incomprehensible, which we may attribute, if we choose, to some supernatural power.

Between these extremes of the infinitesimal and the infinite, but not far from the former, lies that world of finite consciousness within each of us, to which we will now return. It forms only a small portion, as we all practically assume, of an existence apart from any external world, but disintegrated and unconscious. The familiar and frequently employed illustrations of this unconscious existence are the mental processes supposed to incite the rapid movements made to escape injury, or required in the performance of music, which are neither intended nor felt as separate actions. Only the general result is contemplated and perceived.

The slight and imperfect integration here assumed as a condition of consciousness is more or less complete in varying circumstances. When unwelcome, as in the case of pain, it can at times be intentionally suppressed to some extent. "Cowards die many times before their deaths" in conscious anticipation; and the unrecognized anticipation of ordinary consciousness may possibly be modified by resolution, as it may be restricted by nature among the lower animals, as already noticed. So far as this is true, pain may be lessened or extinguished.

Unrecognized anticipation affords us a further illustration of the control of existence by order. We expect the actual condition of things to continue, in the absence of any suggestion to the contrary; an expectation which prolongs what we have called the present. In so far as this expectation is not justified by fact, consciousness may be suspended, which happens, indeed, during the rapid movements recently mentioned; or may recognize an event as still to happen, not as present. Such recognitions obviously attend the feelings of indifference, desire, dread, or intention.

V

Memory, if recognized as such, involves the idea of repetition. This is a comparatively simple notion, like that of parts and aggregates, and provides us with a second step toward the formation of a mathematical system. We remember a sensation or perception in the present, without recognition of the process as memory. This unrecognized memory is afterwards repeated and then recognized. Subsequent recognized repetitions may occur, and there may be repetitions of the recognition as well as of the memory, in any degree of complexity. The actual and historical basis of arithmetic is usually and reasonably referred to the recognition of external objects; but memories in a simpler form would apparently furnish such a basis, without the aid of any experience of the world without us.

The question has been raised whether, under laws of nature differing from those which we know, two and two might make five. It may be partially answered by the remark that memory, as we now understand it, would then be superseded by some process in accordance with which a pair of events would not be

remembered as a pair. But let us not wander from the consideration of what actually happens into speculations about matters beyond the reach of experience.

Any event, however small a part of some aggregate, may itself be an aggregate of parts indefinitely numerous. Memory may repeat some of these parts without others; and, in the infinite complexities which are thus possible, we have, I think, an explanation of the comparative vagueness of the ideas expressed by the words like and unlike. It is of course open to any one to say that repetition, to his mind, is as vague a term as likeness. Others may find it more intelligible.

But however vague the notion of likeness may be, it still appears to involve another, that of universal order, which at this point we find forced upon us more decidedly than before. Any repetition suggests, without absolutely requiring, a necessary sequence of events, and accustoms us to an indefinite confidence in such a sequence. A given assemblage of infinitesimal details, if repeated by memory, appears to demand a continuation by another consequent assemblage. Every repetition, however minute, is the repetition of such a sequence,

when we resolve the repeated event into its infinitesimal elements. "Over the past not heaven itself hath power"; at all events, we feel as sure that what has happened is immutable as we feel that what happens is real, and a remembered event presents itself to us as a necessary sequence. We may conjecture, but certainly without any thought of being able to prove, that memory and chaos are incompatible.

Perhaps it may be worth while to guard against the supposition that the foregoing reflections are meant as an argument for the principle of universal order, which is properly neither a term to be defined nor a proposition to be demonstrated, but an instinct to be obeyed. It controls the conscious action of all animals to whom consciousness can be attributed, and we may recognize its presence, if we choose, even in the unconscious efforts of vegetation. It cannot be established by the workings of our minds any more than an engine can furnish the power by which it is driven. We have only an infinitesimal acquaintance with an infinitesimal part of the universe, and must not pretend to make general assertions about the whole; while any partial statement which

we may find possible must be made under the control of tendencies unconsciously developed in us, among the effects of which are memory itself, as well as the indefinite sense of likeness. Any inquiry whether memory and likeness could be conceived as existing in the absence of that instinct which demands compliance with the order of nature would be an inquiry resembling that whether two and two could make five under a different system of natural law, and must apparently be equally futile.

Different memories may appear as partial repetitions of one another, and to that extent the remembered events are alike. But as we neither know in the present nor remember in the past all the antecedents of anything which can happen, it is not requisite that the partial repetitions which we may observe should be succeeded by other repetitions as exact as their predecessors. Divergences will occur, which we recognize as evidence of unlikeness even in the portions of the remembered events in which the repetition seems most complete.

VI

THERE will probably be a general agreement in the proposition that classification, to be

practically useful, must chiefly rest upon likeness. It is true that voluntary, or intentional, classification may be purely arbitrary. But natural classification, in which language seems to originate, results from the perception of similarities. It would be impossible to have words assigned to all the infinitesimal events composing an existence; considerations of likeness, and a resulting classification, must take place previous to the formation of even an impersonal verb. This would be true if language were to be used merely to assist internal thought, instead of as a means of communication with others. Consider, for instance, the statement "It rains," regarded not as implying an external universe, but merely as an expression of an assemblage of sensations. The order of these sensations, as well as the sensations themselves, must repeat many previous experiences, in order that the expression may have any purpose or meaning. Classification and language, as well as likeness itself, require as a necessary condition of their usefulness the assumption of an order of nature, however deficient in clearness the notion of that order may originally be. Dealing as it does with infinities of infinitesimals, it cannot be expected

to present itself definitely and distinctly to a finite mind, while it may still be a condition requisite for every action of which that mind is capable.

Those who take part in any discussion conducted by means of language must have a sufficient agreement at the outset as to what language itself implies, or their time will be wasted. Two men may assent to a series of verbal statements, and yet, for want of such an agreement, may fail to draw from them any conclusion acceptable to both. Nor can the requisite agreement be obtained by a preliminary discussion, every word of which may be variously regarded. So far as external nature is concerned, little difficulty is usually found in avoiding such perplexities as are commonly called metaphysical; but in dealing with those mental questions which seem at first most accessible to our inquiries, we soon discover that we cannot hope for any general concurrence, and that we must content ourselves with a comparatively limited fellowship among our contemporaries. I am in no way entitled to criticize the opinions of others respecting the foundations of language, however widely they may differ from mine; and, at the same time,

I must allow them to criticize mine as much as they please.

A certain classification of classifications themselves, which has sometimes been regarded as important, deserves some notice before we proceed. Some classes appear absolutely, others only partially, distinguishable. To those who admit the idea of permanent, as opposed to transient, existence; of being, as opposed to happening; there seems a perfectly definite separation between the two conceptions. Numeration, too, as distinguished from measurement of quantity, presents us with a series of separate and distinct classes. On the other hand, the distinction between animals and vegetables, generally so clear, becomes vague in the lower forms of organic life. If we choose, we may regard this last distinction as one relating to our own sensations and thoughts, without reference for the present to any actual world without us. Certain other classifications, such as that of conscious and unconscious existence, or that of past and future events, may be regarded in either way, as we please. We may imagine degrees of consciousness, as we have seen, passing insensibly into unconsciousness; and the past is united with the future in the present.

No further analysis of this subject will here be attempted than that suggested by the remark that absolute distinctions, usually at least, have an artificial character; they seem to be constructed by reflection rather than offered to us by nature. Moreover, we become aware of a constant tendency, as we study any subject, toward vagueness in distinctions which at first seemed clear, and toward the formation of suspicions that our efforts at classification are the struggles of the finite mind to reduce an infinite universe to its own standard. So far as this view is accepted, we may admit that language can never be made definite enough to be an instrument entirely satisfactory to us, and that our knowledge is not likely to attain that degree of precision which we naturally desire for it. Inspiration and revelation, as is known, are the means on which many depend for the gratification of this desire.

VII

Inference is a process referred by some to classification, by others to likeness, and by a third school directly to the unconscious recognition of natural law. Those who entertain the views of classification and likeness above

proposed find these three systems practically equivalent.

Ordinary reasoning, as distinguished from merely formal and generally useless logic, is of course mainly hypothetical, and largely unconscious. Whether conscious or not, it seldom rests on propositions of which we are so sure as to be thoroughly convinced of those derived from them. This is true even in mathematics, where the ultimate basis of our conclusions, when we search for it, is found to be somewhat unsteady. Those who aspire to certainty must obtain it by force of will. Others regard this certainty as equally doubtful with the uncertainty to which they are content to resign themselves.

Even the fundamental principle on which we have assumed all thought, language, and reasoning to rest cannot be stated, as has already been granted above, in the form of a downright assertion. When we make our return to it, after prolonged experience of its guidance, and try to understand clearly what we have been doing, it presents itself most frequently, perhaps, in the shape of a hypothesis the origin of which will be considered below; the hypothesis that if we knew accurately the present con-

dition of the universe in all its details we could then be sure what would happen next. For practical purposes, it is better to say that so far as we do understand the present we are warranted in our expectations of what is to come, without pretending to any perfection of knowledge; and that even the little power which can be gained by observation is worth having. Just now, however, it is theory rather than practice with which we are concerned.

It is no part of my present plan to set forth any theory of reasoning; but having recognized the possibility of such a process, as well as the power of classification and the sense of likeness, it becomes more practicable to employ ordinary language in any desired discussion. Hitherto, every word which could be used has doubtless implied some theory, whether that which I have adopted or another; and these words must have frequently suggested processes of reasoning, because no other words were available, while at the same time no legitimate reasoning could be possible when the foundations of reason itself were to be discussed. What these foundations are, every man has to decide for himself without argument until some warrant for argument can be

found. Men who are unconsciously at variance as to what reasoning implies will vainly expect to convince one another of conclusions which they may imagine to be indisputable.

VIII

Our convictions with regard to the world without us must be derived from inference, unless we choose, as some will, to consider them intuitive, or, with others, to deny their validity altogether. In our dreams, we are surrounded by an external nature as real to us at the time as any other, which we still repudiate on waking, as a mere fiction of our own. It is a familiar remark that our waking lives may be dreams, for all that we can prove to the contrary.

Assuming that we know something outside of the existence with which we began our attempted exposition of opinion, and assuming also that this knowledge results from inference, usually unconscious, let us see what can be suspected with regard to the nature of the process. We may now return to the consideration of that attribute of consciousness above described as unrecognized anticipation, in which whatever is happening is expected to

continue. The incessant failure of this expectation, combined with our unconscious assurance of the order of nature, may induce the conviction that there are more such trains of events than that to which the term existence was applied above; that there is something more to be known in the universe than the feeling, intention, and thought which were originally accepted as realities.

Whether this speculation, for of course it is nothing more, is or is not admitted, it will doubtless be granted that we somehow become persuaded of the course of existences, integrated or not, in infinite number besides our own. Many of us insist on including in this persuasion substances which are, as well as events which happen; they must have matter without them as well as mind within. This view, if accepted, must be intuitive; it is beyond the reach of inference.

One assemblage of external events is of particular importance to each of us, and now requires us again to consider the realities which we originally accepted. Feeling, in ordinary language, includes sensation and emotion. While we will still neglect many problems of classification here suggested, we must admit

either that there is a clear distinction between these kinds of feeling, or, with some philosophers, that emotion may be resolved into sensation and thought. In either case, we shall find sensation appearing as our immediate means of communication with external nature. But we also find a special set of events interposing themselves between us and nature at large. The sensation of a flash of lightning, for example, is referred in the first instance to something which happens in the eye, and this again to something which happens in the clouds. We admit the nature of these occurrences to be entirely unknown to us; all we know is the sensation itself; but most of us feel sure that both external events take place. Others, it is true, will deny their reality, and may go so far as even to refuse credence to the sensation. If we adopt the opinion of the majority, we find, on further examination, that each event may be indefinitely analyzed into parts. As usual, wherever we look, we are confronted with an infinity beyond our mental grasp.

We need not accept the abstract idea of matter as a necessity, before we can speak of our bodies as freely as we can of ourselves

without stopping to discuss the meaning of personal pronouns. These bodies are so necessary to our recognition of other external objects that we take them with us into our dreams; at least, I do not know that any one dreams of being disembodied, and, if he does, I apprehend that he cannot explain to us his sensations in that condition. We dream, certainly, of being more or less than normally agile, but that is a difference easy to imagine. No attempt will here be made to distinguish between dreams of different kinds, or between dreams in general and the ordinary course of consciousness.

If intention and thought do not seem to demand the recognition of the body so imperatively as sensation, it may be because sensation itself seems to furnish them with any requisite antecedent events. As our observation of the body progresses, however, we learn to associate all mental action with the nervous system, and particularly with the brain, and to infer that nerves and consciousness have some necessary connection. Still, it remains comparatively easy to imagine disembodied thought.

IX

Unconscious inferences, indefinitely numerous, lead us to assume the existence of assemblages of events without us, similar to those from which we derive the notions of our own bodies. The nature of such inferences can be only vaguely conjectured; but it is easier to understand how, after the existence of other bodies than our own has been assumed, we can go on to infer conscious mental processes connected with them. In my fourth essay, I have already mentioned the apparent possibility of infinitesimal variations of consciousness in the animal world, passing by insensible degrees to the presumed unconsciousness of vegetables.

In this view of life in general, we appear to have a still less direct conviction of other conscious existences than our own than we have of the unconscious existences in which we consider them embodied. But this view will be unsatisfactory to some, who would prefer to think of other minds as more immediately known to them than other bodies. They may wish to have a perfect assurance of the reality of other human beings, while reserving the

right to consider the material universe as possibly, if not certainly, unreal. Perfection of any kind, however, is beyond the scope of the present essays.

The method by which we arrive, with whatever reservations, at our conviction of the existence of consciousness other than our own, naturally induces us to believe also that this consciousness resembles ours. That is, we consider it at least probable that the sensations of our neighbors are like those which we experience; that a red color, for instance, means to those who are not color-blind something much like what it means to us. This is clearly not a necessary conclusion. So long as the sensation of redness recurs to one man when it recurs to another, they are able to converse intelligently about red objects without the certainty of any similarity in their sensations.

We are apt to extend this presumption of similarity even to unconscious existence. Two men, for example, may witness the fall of a tree. Each knows it only through his own sensations, which may or may not resemble those of the other. But both may assume that if the assemblage of external events before them con-

stituted a conscious life, or if, in the language of my fourth essay, these events were integrated to any extent, there would be some similarity between them and the sensations of the two spectators. This assumption, on consideration, appears to be purely arbitrary. We may regard the events of the material universe as real, without comparing them in any way with those which constitute our own existence. Let a tree fall in the absence of any spectators, and the assemblage of events so designated will be as real, and of a nature as unknown, as if it were witnessed by men.

X

Each present event, in the view which has here been taken of the present, is infinitely divisible; and its predecessor or successor in any given series differs from it only by an infinitesimal variation in the past or future. This tends to give the series that quality of continuity which should apparently belong to an orderly universe as distinguished from a chaos. The sequence of intention and execution, to be further considered below, is one chief method by which the sense of continuity is extended beyond the present, as well as, probably, a

principal source of the unconscious assurance of order controlling our inferences.

The question here suggests itself whether the course of consciousness should be regarded as composed of many series proceeding simultaneously, or whether it forms but one infinitely divisible series, finite and unlike parts of which may alternate in the conscious aggregate. This is practically the question stated by Dante at the beginning of the fourth canto of his Purgatory, and, according to him, the second view, that of a single series, is the orthodox doctrine. At all events, it is that easiest to conceive and to hold. For convenience, then, we will regard events as proceeding in single series, whether integrated or not.

The meaning, or the various meanings, of identity must next be considered. When we say that two pieces of cloth have the same color, as distinguished from the same kind of color, we are speaking, of course, only of a high degree of resemblance. Another view of identity is emphasized in the phrase "one and the same"; that is, unity is here the prominent notion. Two events may belong in this sense to the same series. Each of us has direct knowledge of one such series, and assumes that he

knows of others by inference, or, as some may prefer to believe, by intuition. Each series, regarded as an aggregate, is constantly extending itself by the addition of new events, and memory is never capable of reproducing the completed portion of it with all its infinite details. The sense of personal identity will be referred by some to an unknown agent, apart from the series itself; by others, to the vague notion of that series furnished by memory. The form of our language is favorable to the first of these views; those who adopt the second view must consider the first as illustrating the power to mislead which language acquires from the manner in which it has been developed.

Proper names, with which we may include the personal and demonstrative pronouns in the singular number, have come into use to supply practical wants, not to express philosophical theories. They are employed to refer to special series of events, each of which is regarded at the moment as single, however complex it may appear when more closely examined. All this will still be true of a proper name, even if we also believe it to designate a metaphysical substance. The reference which

it implies to the corresponding series of events is of course indefinite and cursory; the very purpose of the word is to evade the necessity of entering into details not requisite to the comprehension of some special idea to be conveyed by the sentence in which it occurs. The identity which it indicates may be expressed by the statement that all the events to which reference is made belong to one and the same series. My fourth essay contained a suggestion that, in this sense, thought and the thinker may be regarded as a part and an aggregate.

Those who adopt this view of the meaning of proper names, to the exclusion of that notion of substances which others believe them to designate, are relieved from the necessity of adopting either of the medieval hypotheses known as realism and nominalism. Common nouns denote classes, and the reality of the events upon which any classification depends is also the reality of the events to which reference is made by the names of the separate components of the classes resulting from that classification. It is only when we attribute to the individual a reality additional to that of the events which his name implies that we have to decide whether we will also attribute

such an additional reality to the class to which we have assigned him.

XI

A SPECIAL distinctness and vigor is a characteristic, in most men's minds, of that sense which each has of his own personal identity. The reason of this, in the view here adopted, is that each knows the events of his own life directly, and everything else only by inference. The recognized continuity given to his own life by the ordinary sequence of intention and execution, which has already been noticed, is also of importance in maintaining his sense of personal identity. When events are classified in comparatively discontinuous series, the fact that two events belong to the same class does not impress us with so strong a feeling of the connection between them. Still, in the case of abstract nouns, such as faith, hope, and charity, for example, the contemplation of the events upon which the corresponding classification depends may excite strong feeling. In this case, we incline to personify the notion given us by the abstract noun, but we are usually aware that this personification is the work of our own imaginations.

A classification made for strictly intellectual purposes, unattended by emotion, does not so readily lend itself to personification. The cardinal numbers, for example, result from the formation of classes very convenient in business transactions, but not directly appealing to our feelings. Hence, duality is not likely to be personified, however possible in theory such a personification may be. The object of the intellect is generally to make thought definite by excluding, so far as possible, those notions which relate to infinities of any kind. The repetition of the idea of a number is a comparatively simple repetition; a repeated feeling involves infinite details. All classifying processes neglect some details; but a classification of virtues is less precise, as we say, that is, retains more of the mystery of infinity, than a classification of polygons.

An example of an intermediate sort of classification is the classification of color. We have already noticed that "the same kind of color" implies a more restricted notion of identity than "the same color," although, of course, this last expression is often practically equivalent to the first. If it means anything which can be expressed by a single general term, such

as "red" or "blue," then identity has taken the place of mere similarity. But such general terms are felt to be vague as compared with those of science, although not so closely connected with emotion as to lead readily to personification.

It is almost needless to remark that no other subject is ordinarily so interesting, and, in that sense, so provocative of emotion, as his own life is to each of us; and to personify this requires no recognized effort of imagination. Such a process, however, is not properly to be called personification, which means a recognized imitation of it.

XII

One very familiar personification is that of Time; but I have never heard of a personification of Space, and I presume that any such personification would appear forced and unnatural to the ordinary mind. The reason seems obvious; the idea of Time is derived from that sense of the succession of events upon which, as here supposed, our own personality depends, while Space is regarded as an attribute of external nature exclusively. Success can scarcely be expected in any attempt

to analyze or minutely to describe either of these ideas, for we have no assurance that the sensations in which either originates resemble one another in different minds. All we know is that these sensations recur under similar conditions, so that it is possible for us to understand one another's language with regard to them.

We ascribe both to time and to space that continuity of which consciousness assures us in our own lives. This involves the notion of quantity, as distinct from number; but in practice, to make this notion useful to us, we try to express it by number, according to familiar mathematical expedients. Sensation itself, no less than the derived notions of time and space, illustrates the possibility of numerical measurements of quantity. Quantities of sensation are reduced to numerical forms by memories of aggregation and separation. Thus, the combined brightness of two lights is remembered as greater than that of either separately observed; and the effort of lifting two weights together exceeds that required to lift one.

Quantities of time and space would perhaps not be conceivable at all in the absence of the

idea of motion. Every motion is a progress from the past into the future, as well as a change of place, whatever that may imply, when we consider that we have no position in space, like the present moment in time, from which we can reckon. The present position of the material universe being unknown, we have only the present relative positions of its parts as an origin of measurement.

XIII

Each man's notions of time and space are presumably the result of unconscious inferences, inherited or not, from indefinite sensations. On this presumption, we cannot hope distinctly to comprehend them, even supposing them to be similar in different persons. We can only partially illustrate their origin by means of particular examples.

A student may wish to consult a book which he sees on a shelf on the farther side of his room. He is aware, in the first place, that his intention cannot instantly be followed by its execution. An indefinite quantity of sensation must intervene, the notion of which is made somewhat more definite by the recurrence of similar sensations, such as those attending the

steps taken in crossing the room to the shelf. The quantity of external events which is assumed to correspond to this quantity of sensation is a quantity of that combination of space and time which we call motion, the idea of which, I think, must precede that of space and time themselves.

The various unrecognized experiences which have formed our idea of motion have shown us, secondly, that the initial and final events in any instance of motion may be separated by one minimum quantity of motion, and by only one such quantity. The kind of motion corresponding to this minimum quantity is that called rectilinear. These initial and final events may also be separated by any one of an indefinite number of quantities of motion, varying from the minimum to as great a quantity as we please to imagine; and each of these quantities may appear in as many distinct forms as we please. The distance of one external event from another is the quantity of rectilinear motion intervening between them, and no other quantity of motion can properly be called a distance. The word distance has of course other meanings than this. In spherical geometry, for example, it is applied to an-

gular measurements. But the term "shortest distance" instead of "shortest path" or "shortest way" is needless and likely to produce confusion of ideas.

The absence of rectilinear movements within any continuously observed group of events is our warrant for regarding it as a material object. As already noticed in my tenth essay, such terms as "material object" are formed for the purpose of excluding from consideration all that multiplicity of details in which the corresponding ideas are here assumed to originate. This exclusion readily leads to the conviction that the terms do not designate these details, but something more permanent; a conviction which is not to be disturbed, in the minds of those who entertain it, by any discussion of its nature.

Whatever conception of material objects we may prefer, it leads us to regard the external world as composed of bodies more or less permanent, and gives us a basis for classification and nomenclature. My ninth essay has indicated the comparatively indirect process by which we arrive at the conviction of other mental existence than our own.

XIV

THE initial and final events of any rectilinear motion may coincide with those of any other motion; and this requires us to admit that different quantities of motion may correspond to a given quantity of what we may now begin to call time. Without the observed facts of motion, the mere succession of events making up a mental existence would hardly furnish, I suppose, that idea, or those ideas, of time which we actually have. With the idea of time comes that of space, and that of the relation between them which we call velocity, when we have reduced it to a mathematical form. All this seems to be required before we can obtain a basis for the study of geometry. Arithmetic, as noticed in my fifth essay, might possibly be founded on the repetition of mental events; but geometry is the study of space, and we cannot discuss space without assuming something with regard to motion, time, and velocity.

It has been customary to begin geometrical treatises with a considerable parade of definitions, axioms, and postulates, as if these were all that would be needed for the proof of the

ensuing propositions; and then to slip in here and there all kinds of assumptions relating to the superposition of figures, the rotation and reversal of planes, and so on, which are much less readily accepted, when attention has once been directed to them, than the formally avowed hypotheses previously set forth.

Every definition implies the postulate that the ideas connected in it are really compatible; and with a sufficiency of new technical terms, we can proceed from one definition to another with little or no need for geometrical argument. The best practical form for an introduction to geometry need not be discussed here; but any consideration of the theory of space will lead us to some examination of the ordinary Euclidean conception on which our practical geometrical conclusions must in turn depend.

XV

Velocity, as well as motion itself, is a quantitative conception. The actual origin of the idea of quantities of velocity must be referred to unconscious mental processes, so that any explanation of it can only be a conjecture. Perhaps the sense of quantity connected with the sensation of muscular effort, already noticed in

my twelfth essay, has much to do with the notion of velocity. In our own movements, we exert ourselves more or less according to the rate at which we move; and in studying the movements of external objects, the effort of following them with the eye, or of resisting them with the hand, must vary with their speed. But however the fact may be explained, we certainly regard velocity as capable of measurement, and, without this conception, it seems probable that our present ideas of space and time could not be maintained.

During any given series of events constituting a movement, the velocity of that movement may be increasing or decreasing. Observations of this kind lead us to the idea of a uniform velocity, which neither increases nor decreases. This idea, of course, is purely abstract; we cannot prove the occurrence of uniform velocity in any particular instance, but we accept it as a limit at which an increase or decrease of velocity terminates, and it is suggested by any great similarity in the memories which repeat successive parts of the observed motion.

Equal distances, traversed with a uniform velocity, give us a notion of equality in differ-

ent intervals of time, which otherwise we could hardly attain. The notion of equality in distance appears to depend upon our ability to contemplate simultaneously, or in rapid alternation, various distances in juxtaposition; and since this must result from our experience of motion, which enables us to effect such a juxtaposition, we are again reminded that motion is requisite to ensure the existence of our notion of space. Since different times cannot thus be brought together, our ideas of their equality or inequality must apparently rest upon the combination of the ideas of distance and velocity. It can scarcely be necessary to remark that the similarity of successive events, such as the ticks of a watch, cannot prove the equality of the times which are required by these events.

Time, then, as a measurable quantity, distinct from the mere general notion of successive events, is so intimately connected with space and motion that we must assume all these ideas taken together to be requisite for the establishment of any rational system of geometry.

XVI

Our ordinary geometry actually depends upon unconscious inference; and we are already

far advanced in it when we first begin to consider it consciously. Acknowledging all this, we may still endeavor to describe a method of thought which might conceivably lead us to the mathematical conception of space necessary for geometrical reasoning.

After reducing the present moment to an infinitesimal, which we do as soon as we direct our attention to it, we find the external universe appearing as an infinite set of inchoate events at various distances from each other. No motion among them can take place until some time has elapsed, and no motion among them is then necessarily conceived to occur. Their distances, regarded as constant, are practically conceived as the amounts of time corresponding to quantities of motion under the supposition of a uniform velocity.

But while no relative motion in the external universe appears as a necessary consequence of the lapse of time, this lapse itself, however small, appears as a general motion, converting inchoate into developed events. This motion is always conceived as rectilinear, when the interval of time in which it occurs is sufficiently small. The well-known paradox, in which motion is described as impossible because it can

neither occur where an object is nor where it is not, shows us that we feel obliged to regard the successive places of that object as adjacent; that is, we regard the transfer of the object from one place to the next to be accomplished with that least possible movement which we call rectilinear.

Continuing to exclude the idea of relative movement, we find the development of all events simultaneously and equably progressing, so that we have, from one instant to the next, the idea of equal rectilinear movements, continuing at distances from each other equal to those originally existing. Further, any event remains, during its development, equally distant from any of the inchoate events from which it was originally equally distant; and this idea still prevails whether we look backward to the past or forward to the future. In either case, the distances increase equally in equal times. Admitting the possibility of all these conceptions, without the expectation of finding them realized in practice, we derive from them the general notion of ordinary, or Euclidean, space of three dimensions only, with its planes of two opposite and similar faces, and its parallel lines everywhere uniformly distant from

each other, and perpendicular to a series of parallel planes. Each line, in this view of space, corresponds to the progress of an event or series of events, and each plane to the state of the universe at a given instant. The idea of direction will be considered a little later.

To avoid misunderstanding, it is necessary constantly to repeat that our ideas of space have been formed unconsciously, and not by any such conscious analysis of the facts of time and motion as has been attempted above. But it remains probable to me that whatever idea of space each of us may have, it depends upon personal or ancestral experience of the facts of motion, and that our inability to conceive of more than three dimensions in space is practically equivalent to our inability to conceive of events as otherwise than either successive, simultaneous, or at once simultaneous and successive. A single inchoate event has the relation to space of a geometrical point; it is somewhere, but has no extension. Extended by time, it gives us the idea of a line; that of a surface is given by inchoate events in general; and their simultaneous development corresponds to the only notion of space as a whole which we can distinctly grasp.

Accordingly, we feel that the succession of events constituting the operations of the mind, or the mind itself, as we may choose to regard it, has a position, but occupies no space. Its position appears to be somewhere in the relatively immovable parts of the body; no one, probably, ever considered mind as specially located in the arms or legs. In ancient times, the heart or liver seemed as probable a seat for it as the brain, to which it was afterwards assigned by a rather complicated series of inferences.

XVII

According to the hypotheses above stated, our general notion of extension, whether in time or space, is derived from the succession of events; our notion of equality from the observation and memory of external events; our measurements of space from the facts of motion; and the suggestion of a possible measurement of time from our sense of velocity as a quantity, however that sense may have been obtained. In all physical investigations, we are accustomed to admit the conception of time thus expressed by Newton:[1] "Tempus

[1] *Principia*, Scholium, p. 6.

absolutum, verum, et mathematicum, in se et natura sua sine relatione ad externum quodvis, æquabiliter fluit, alioque nomine dicitur duratio"; and again,[1] "Accelerari et retardari possunt motus omnes, sed fluxus temporis absoluti mutari nequit." But the very possibility of this conception of time as a uniform current, unrelated to external events, must depend, I think, on these external events themselves. Newtonian time and Euclidean space cannot, strictly speaking, be separated from each other; they are parts of one general conception of the universe, to which the loss of either seems destructive.

When we consider time and space separately, and refuse to allow the two ideas to maintain each other in our minds, we have no longer any assurance of time as a measurable quantity, or of a space of three dimensions, with our familiar planes and parallels. Abandoning altogether the relation of space to time, we are free to imagine additional dimensions in space, and to accept on an equal footing with the Euclidean, or, as it has also been called, the parabolic geometry, other geometrical conceptions analogically designated by the terms

[1] *Ibid.* p. 8.

hyperbolic and elliptic, which it is needless to discuss in this place.

The idea of direction appears to follow with little difficulty from that of Euclidean space. Selecting one point as an origin, we find an indefinite number of others equally distant from it. The rectilinear motions between the origin and these points differ, not in amount, but in another way to which the name of direction is applied. Since any observed or imagined rectilinear motion requires time for its completion, the course of time may be regarded as having any direction we please, all other directions being for the moment excluded by our previous supposition of the absence of relative motion.

The observed rotation of external objects with respect to each other also assists in forming our ideas of Euclidean direction, which might be variously expressed in a treatise on geometry by suitable definitions. But, in my judgment, the straight line should not be defined by means either of distance or of direction, both of which are comparatively complex ideas derived from that of straightness, as is shown, indeed, in the case of direction, by the etymology of its name.

XVIII

THE idea of cause and effect appears to originate in the sequence of intention and execution, which has been regarded in my eleventh essay as an element in the conception of personality. It is then transferred by more or less distinct personification to sequences of external events, in which one or another event, or the assemblage of many events, is regarded as a cause, according to the view of these events which may be taken at the moment. The cause, for instance, of the explosion of a cartridge may be the pulling of a trigger, or the chemical structure of the cartridge, as we please.

When this view of causation is extended as far as possible, we obtain that general statement of the order of nature already mentioned in my seventh essay, in which the momentary condition of the entire universe is assumed to be the necessary consequence of its predecessor, and the necessary preamble of that which is to follow. This statement, however, taken separately, does not give prominence enough to that notion of continuity which forms so important an attribute of what we consider an orderly universe. We have assumed a principle of

order as a requisite for consciousness, memory, similarity, classification, inference, and causation, and we shall now be as nearly able as we can ever be to express our understanding of what it implies. This understanding will be vague at best; for the subject is concerned with infinities, and we are finite; while at the same time our thoughts must be expressed in words each of which depends for its intelligibility upon the previous acceptance of the principle which is to be set forth.

What exists, continues, unless disturbed by interference from without. A particular case of this general rule is the law of inertia in physics. Interference, however vigorous, is not absolutely abrupt, but requires time, however brief, for the development of its effects. Absolutely complete repetitions do not occur, but partial repetitions are customary, and afford a practically useful basis for prediction. With whatever reservations, we find that the order of nature enables us to perceive similarities, to form classes, to draw inferences, and to construct language; but not to obtain certainties. They are theoretical, not practical matters. We have only a probable anticipation of the future, which may be contradicted at any

moment by the result which we observe. The contradiction may lead us to new knowledge, without making us deny the practical value of prediction, although preventing us from granting it implicit confidence.

We must not understand the order of nature in such a manner as to exclude the most important and most directly known part of nature: that of mental operations, and, in particular, of intentions. We are all constantly interrupting the order of merely physical nature by what we call voluntary action. If we choose, we may assume such action by unseen agencies to occur at any time, or constantly, without disturbing the order of nature in its most general aspect.

XIX

We return to the consideration of intention and execution, above assumed as the origin of our idea of causation. Here we need comparatively little knowledge of the existing condition of the universe to justify a prediction; yet we have no certainty. An orator may have a stroke of paralysis in the middle of a sentence, and the next word which he meant to utter will remain unspoken.

We cannot predict intentions of our own, and still less those of others, with a degree of confidence at all approaching that which we feel in the execution of a known intention. If the action which we are to perform is very soon to occur, the prediction of the intention can scarcely be distinguished from its actual formation; if the action is remote, we are aware of too many possible changes in our present circumstances to allow us to predict what we shall mean to do when the time for action arrives. If, indeed, we can make such a prediction, it would seem that we already mean the action to take place.

It cannot be surprising, then, that intentions should often be regarded only as causes, and not as the consequences of any previous events, while the execution of any intention is regarded only as its consequence. This may be presumed to be the mental attitude of those who maintain the doctrine of the freedom of the will in its simplest form. The paradoxes to which this doctrine leads us are too familiar to need repetition in detail. If the assemblage of events constituting the previous life of any man does not largely influence his intentions for the future, we shall be unable to assign to

him any definite character. Without a character, his condition is even beyond insanity and irresponsibility, a result directly contrary to that desired by the advocates of his freedom. Their opponents admit that his character does not absolutely determine his intention at any given moment; the circumstances surrounding him at the time must have their share in his decision; but the strength of his character is shown by his comparative independence of these circumstances.

The meaning of character appears to be the expectation of behavior under given circumstances which is formed by knowledge of previous events. Responsibility is the expectation of a judgment of character, with its attendant feelings, which is largely to depend upon the execution of a contemplated action.

If a man previously thought to be selfish and unkind does anything apparently generous, the comment made upon his action by an advocate of the theory of free will would be, I suppose, "You see he can do well if he chooses." Unless this is to be taken merely as a recognition of the observed events, I should regard it as a substitution of words for distinct thought; it seems to me to convey no

intelligible hypothesis. Under similar circumstances, a religious man may say, "All things are possible with the aid of divine grace." We have here an explanation of the event which is intelligible, and tenable by any one who finds it edifying. But the ordinary remark upon the subject would be, "His character, then, is not so bad as I supposed it."

That view of personal identity which regards it as something different from the events constituting the life of the person has doubtless much to do with the theory of free will. Intentions, I suppose, are regarded by those who adopt such a belief as originating outside of that sequence of events to which our ideas of cause and effect are confined. But the theory of the universe leading to this result has been regarded throughout these essays as suggested by words rather than by ideas.

While we have assumed personal identity to depend upon the continuity of the events of a single life as a whole, we have repeatedly noticed the importance of the intentions forming part of this series in exhibiting this continuity. We may almost say that the intentions make the man in the ordinary apprehension of him as a person. But this does not warrant us

in excepting them from the ordinary principle of dependence upon some preceding events, partly or wholly unknown.

XX

If the treatment accorded above to a question which has exercised the ingenuity of mankind for so many ages should appear to any reader far too negligent, he must remember that I am only casting my vote upon that question, not presuming to decide it. The general theory of ethics, which we now find immediately before us, will necessarily receive even less discussion in proportion to its importance.

The ideas of pleasure and pain are too simple to be otherwise defined than by mere synonyms, like those used by the ancient Stoics. They form the foundation of all systems of ethics, even when they are as much as possible avoided. One such system regards the moral law as immutable, and as imposed on us by superhuman authority. It is also usually conceived as having the sanction of future rewards and punishments. In that case there is no doubt of its ultimate dependence upon the desire of pleasure and the apprehension

of pain. But when this addition to the original idea of a divine command is rejected, it remains obvious that there is pleasure in obedience, and pain in disobedience, to an authority regarded with love and reverence; while, if no respect is entertained for a lawgiver, and no apprehension is felt of any consequence of his displeasure, no motive for obeying him can remain.

The principal alternative to the view of the moral law which makes it depend upon inspiration from above is that which makes it depend directly upon the disposition of man to seek pleasure, and more particularly to avoid pain. Before the comparatively recent acceptance, among the thinking part of mankind, of the present opinions about evolution and inheritance, there was more difficulty than now exists in understanding the promptness with which moral emotions arise in the ordinary mind when any occasion occurs for their exercise. It must, however, have been clear to every ancient inquirer into the subject that social as well as selfish propensities formed part of the human constitution, and were ready to influence conduct without the intervention of conscious reasoning. Those who rejected the

method of accounting for these propensities by divine inspiration were under no obligation to substitute for it any other theory; they might well be content to take facts as they found them, and admit conflicting impulses as among the ultimate conditions of life. The relative amounts of pain to be incurred by resistance to one or another of these impulses would then be regarded as controlling the motives to such actions as would be called good or bad. This process would require no conscious reasoning in cases where immediate action was needed.

Two main objections may be made to such a view of life. First, if our purpose is to attain pleasure, we have no assurance of success through any action of our own. Happiness is elusive; as the German song says, it is where we are not. It comes rather when we do not strive for it than when we do. This objection, however, seems most important to those who insist on certainty in human affairs, and are not satisfied with the mere probability which most of us are ready to accept as a reason for action. Every one knows what, on the whole, will please him, and knows still better what will prove unpleasant, especially when the pleasure or pain of the immediate future is concerned.

Secondly, the question may be raised whether we can balance pleasure against pain, or one pain against another; whether there is any quantitative relation in such emotions. Here, again, we have an unreasonable demand for the precision of mathematics in matters of feeling. We do practically consider pleasure and pain as measurable and comparable quantities. A man may decide upon a trip for pleasure across the Atlantic, although he feels sure of being seasick both on the outward and on the homeward voyage. But when we approach equality in such measurements, we cannot pretend to decide which of the quantities compared is the greater.

In any case, then, which does not call for immediate action, ethical deliberation, based on considerations of pain and pleasure, is possible, and is actually in frequent use, whichever theory of the moral law may be approved.

XXI

THE opinion attributed to Epicurus by Cicero,[1] that dishonor would be no evil if attended by no pain, is misconstrued by the oratorical philosopher, perhaps intentionally, for the sake

[1] *Tusc. Quaest.* ii, 12.

of his rhetoric. If correctly stated, we must understand the assertion to imply a definition of evil as pain itself, or any cause of pain, with a correlative definition of good as pleasure or whatever produces it. Little fault, probably, will be found with these definitions except that they serve us poorly in distinguishing between good and evil, since one man is pleased by an event which pains another. Accordingly, in utilitarian ethics, the general welfare, commonly restricted, however, to the general welfare of mankind, excluding creatures regarded as inferior, is held to be the proper aim of goodness. Now this general welfare is incapable of any exact definition, and the notion entertained of it greatly varies in different times and places.

The action of the good Samaritan in the parable will probably be universally approved by all who are informed of it. The labor and inconvenience endured in order to relieve immediate and unmerited distress will always appear desirable in the interest of mankind generally, as well as in that of the sufferer himself. The legendary self-sacrifice of a Decius or a Winkelried to ensure the victory of his countrymen, from their point of view at

least, will merit similar approval. The sentiment of honor which supported and still to some extent supports the practice of duelling, and that which is said to induce the Sicilian peasant, as well as others nearer us, to prefer private vengeance to legal methods for the redress of injuries, may also be defended, under special conditions of society, by utilitarian as well as by intuitive ethics. Finally, political assassination, so frequent in our own times as well as formerly, appears to the assassins themselves as a service to humanity. Whether it will so appear to others will depend upon its results. The assassins of Hipparchus were eulogized as heroic liberators by later Athenian generations; the assassin of Lincoln was almost universally detested; but would this have been the case if his action had resulted in any great political change agreeable to a large section of his countrymen?

In any argument relating to the general welfare, we ought, apparently, to consider the future as well as the present, and inquire into the utility, as examples to be followed, of such actions as we may discuss. But in successive instances of similar situations, the circumstances must be sufficiently alike to make the prece-

dents applicable; and as the circumstances are sure to vary, we shall still find it difficult to lay down such definite rules of conduct as we may desire. We have practically to limit ourselves to the consideration of the immediate future, and, in any case, to trust largely to the relative strength of our natural tendencies, however we suppose them to originate.

Most of us, however, conclude from our observation of life that our social sentiments are relatively too feeble for the general good, and need encouragement, while our selfish instincts require control and repression. The conflict of these opposing tendencies is disagreeable, and becomes extremely painful to a sensitive spirit, eager for divine guidance. This, I suppose, is the explanation of what is called the sense of sin; a term the meaning of which I have known a wise and highly virtuous man to say he could not comprehend. Others, again, will tell us that unassisted human nature will always fail to control its selfishness, and that without religion there can be no true morality. To make this plausible, however, they have to imagine a human being, if so he can be called, nearly destitute of sympathy and affection except for himself. The questions may be

asked whether any motive, apart from religion, can be suggested to such a being for the cultivation and development of his rudimentary social impulses, and, if this motive proves insufficient, whether he will be more accessible to others derived from religion.

If the unsympathetic creature thus imagined is also too stupid to care for anything beyond the present moment, his case seems indeed to be hopeless. If, however, he is accustomed to consider the future, he is doubtless already in the habit of insuring himself against misfortune so far as possible. The ancient type of this sort of selfish man was the miser, who strove for a hoard of money which he would not use for the benefit of others or for his own; his modern successor finds it more advisable to invest his property in various ways, not omitting what we commonly call insurance. Now, in his consideration of the future, he must become aware that even if he perfectly succeeds in avoiding other misfortunes which may make him dependent upon his neighbors, nothing but an early death, the anticipation of which is itself a misfortune, can enable him to escape old age, in which his capacity for strictly selfish comfort will decline, so that if

he has no sympathy with the younger people around him, he can only envy them; a prospect which certainly cannot be attractive. But if he attempts to cultivate sympathetic feeling earlier in life, he will find himself involved in the conflict already mentioned between opposing emotions. This is the cost of the desired insurance; I will not presume to decide whether the rate is reasonable.

More obvious motives for sympathetic action, if not for sympathetic feeling, arise, of course, from the apprehension of hostile sentiment, and probably of hostile action, on the part of other people. The sentiment may not appear important to such a man as we have been considering, but the action can hardly be a matter of indifference; while the attempt to restrain the outward appearance of selfishness leads to an internal conflict of a meaner, and perhaps no less unpleasant, kind than that of the social and selfish instincts.

Religion may doubtless be more powerful than mere reason in some cases of the sort above discussed; but we are told in the parable of Lazarus that "if they hear not Moses and the prophets, neither will they be persuaded though one rose from the dead."

XXII

We have hitherto been dwelling upon the older ethical notions antecedent to that conviction of the course of nature which has tended to become so prevalent during the last half century. In the ordinary view of the universe which now presents itself to our minds, we regard its constitution as one of "checks and balances," like our parliamentary governments. A "struggle for existence" is everywhere in progress, and the means employed in this struggle are continually counteracting themselves, as well as each other. It is an advantage to any species of animals to be prolific; but if a carnivorous species is more prolific than its prey, it is tending to extinguish itself by starvation. Similarly, indiscriminate charity is known to increase the very evil which it attempts to suppress.

Our experience of life, accordingly, enforces upon us the ancient maxim "No excess"; but an exclusive reliance upon this principle of action may easily itself become excessive, tending to restrain sentiments which are already relatively weak, and which require encouragement rather than repression. "No

deficiency" is as valuable a rule in itself, and better in so far as it urges us to action rather than to apathy, provided, of course, that our theory of life gives the preference to activity.

The "struggle for existence" aims at the prolongation of the life of the individual or the species; and from this point of view goodness means success in this prolongation, which requires a continual readjustment of propensities previously acquired to present circumstances. This readjustment can never be satisfactory, because present circumstances are transient. We are always behindhand in our conscious or unconscious efforts to conform to existing conditions, and cannot avoid the disturbances occasioned by the conflict within us of contradictory impulses. It has already been admitted that religion affords many minds the most available protection against the distress of some such conflicts.

Without intending to controvert any of the various opinions which may be held upon this subject, let us proceed at once to the conclusions which are here assumed to result from the foregoing considerations. The moral law, in the view thus taken of it, is a variable code, under continual readjustment to observed

facts. It is expressed in propensities, mainly inherited from our ancestors, some obsolescent, others becoming stronger, and many of those in full vigor contending with each other. In any ethical situation demanding immediate action, we are governed by the relative strength of the various impulses acting at the moment upon our minds; that is, as said in my nineteenth essay, by our characters. When there is time for consideration, we resort, consciously or not, to anticipations of the relative amounts of pleasure or pain to be expected, on the whole, from different courses of action. Such anticipations are indefinite, owing to our inability to measure advantage and disadvantage with precision, and we often reverse our judgments upon a subsequent review of cases formerly determined.

Before quitting the subject, let us notice the familiar ethical puzzles relating to truth and falsehood. It is generally admitted that a lie may rightly be told to protect an innocent fugitive from pursuit, on the ground that the pursuer has no right to the information for which he asks. Again, it is currently reported to be an approved practice among those endeavoring to learn the truth about a crime to

attempt to obtain a confession, or testimony against others, from a suspected man, by falsely telling him that some one else has made a statement which implicates him. In this last case, I should say that the value of the result must be too small to warrant the falsehood employed in obtaining it. These instances merely illustrate the absence of precisely defined moral rules, and the difficulty of balancing the general advantage of mankind against the special interest of the moment.

XXIII

Our ideas of good and evil, right and wrong, however deficient in precision, are probably more distinct than our use of the words relating to them. A man may be right in avoiding a serious injury to himself at the expense of a trifling inconvenience to a friend, but the opposite course is absurd rather than wrong; it may even be an evidence of goodness. In general, good deeds are considered to be such as benefit others than the doer. But when good and evil are discussed apart from ethical considerations, we are more likely to regard them as causes of pleasure and pain in general, according to the doctrine attributed to Epicurus, as appeared above.

We have just seen that the perpetual readjustment of propensities to circumstances which is the most prominent characteristic of what we call evolution leaves us always desiring something unattainable at the moment; and when we might reach it but for a change of circumstances, that change has occurred, so that we are no better pleased than before. This fact seems to form the apology for the theory commonly called pessimism. This philosophic pessimism cannot recommend the refusal of the human race to continue itself; for if wise men leave no descendants, the fools remain; and if the entire race comes to an end, a new one may develop from the lower animals.

An unreflecting animal cannot in the philosophic sense be a pessimist; and a reflecting animal will do well to use his intellectual powers in the restraint of unreasonable aspirations after perfect satisfaction of any kind. Let him endeavor to mend matters for himself and others as he finds opportunities for doing so, without expecting to attain a condition in which mending will be less urgently required than it is at present. The labor of mending may be a pleasure as well as a pain, and the wise man will

keep the pleasurable aspect of it before him as much as he can. This mental attitude is presumably what George Eliot meant by meliorism; for if that term is used to mean the notion that the world is approaching a more satisfactory condition, it expresses only a delusion. What is to come would perhaps be more satisfactory to us if we had it now; it will not satisfy our successors better than our present state satisfies us.

Philosophic optimism needs no further refutation than that given us by Voltaire in his "Candide." No verbal ingenuity will persuade mankind that they are as well off as they might be. It is true that if we destroy an evil we lose the pleasure of overcoming it. Virtue and the admiration of virtue are gone when good intentions find no resistance. But we still feel that we should be happier if virtue were needless.

Practical optimism and pessimism, as distinguished from the mere speculations bearing those names, relate to an attempt at comparing the relative amounts of good and evil which we actually experience. On the pessimistic side it may be urged that extreme distress so far outweighs any possible pleasure as

to be wholly incapable of compensation. On the other hand, it is said that moderate nervous excitement is generally a pleasure, becoming painful only when too much increased, and that extreme disturbances are rare and brief; also, that we have a considerable power of controlling our feelings, and can often succeed in moderating, if not in suppressing, distress which is purely of mental origin; sometimes even that resulting from material causes.

But all attempts to balance the amounts of pleasure and pain in even a single life are futile. The problem is too vast for a finite mind. During his last illness, no doubt, a man may be excused for being a pessimist, but the mere anticipation of it should not make him so. Sympathy with the pleasure of others, and freedom from envy, are our greatest security for such happiness as we can have. There is one large part of life in which we can all be optimists. The absence of knowledge is no evil, while its acquisition is a good. The pleasure of seeking new information may be enjoyed whenever we have leisure for it.

Upon the whole, we may decide rather to call ourselves agnostics, so far as happiness is concerned, than either optimists or pessimists.

XXIV

In what has just been said, we have again been approaching that limit of possible thought which we call infinity. To play about a limit, however, is a human tendency which is not easily controlled, and speculation extending beyond the possibility of uninspired knowledge is so universal that it must not here be absolutely neglected. We shall first be obliged to consider the value of evidence, so often invoked to uphold hypotheses relating to the infinite.

Hypotheses are of two kinds, which I will call explanatory and exploratory, to avoid the use of any term seeming to imply disparagement. An explanatory hypothesis simply suggests a cause for some observed effect, without undertaking to indicate the method of its operation, or to predict the occurrence of a similar train of events; while the attainment of a basis for prediction is the chief aim of the kind of hypothesis here called exploratory. It often happens that such a hypothesis seems merely explanatory to those not interested in the investigation which it suggests. Thus, the hypothesis of gravitation is apt to appear to the ordinary mind as an explanation of the

fall of an apple by the assertion that the earth attracts it, while to Newton its real meaning related to possible predictions of the apparent positions of satellites and of planets.

Evidence asserts sensations; it may thus be able to verify predictions, and this is the only sense in which it can be said to prove hypotheses. But this proof is not retrospective, with regard to supposed causes; its result is to give us confidence in future predictions. The law of gravitation does not prove attraction, if that word implies anything beyond the observed fact that the apple falls when released.

It was assumed in my eighteenth essay that our ideas of cause and effect are derived from our perceptions of intention followed by execution. It is not surprising, then, that mankind have always been prone, on the occasion of any unexpected event, to explain it by means of some personification. Familiar events usually pass without suggesting the need of an explanation; but if an explanatory hypothesis is set up, some sense of personification may attend it. Thus, when gravitation is explained by attraction, the attracting body is regarded as a personal agent.

An eclipse is an event sufficiently unusual

to excite the imagination of a savage, who will be apt to ascribe it to the maleficence of some hypothetical animal or demon. As men advance in civilization, they learn to classify eclipses with various customary terrestrial phenomena which occasion no wonder, and they then regard the earlier hypothesis as a superstition. The ancient citizen of Athens or of Rome, if moderately instructed, may have regarded an eclipse as an ordinary event, requiring no special hypothesis to explain it. But the same citizen, perhaps, might regard thunder and lightning as resulting from the intention of a divine personage called Zeus or Jupiter, who governed the air, in particular, although he was often regarded as in supreme control. As time went on, thunder and lightning, too, came to be considered as customary events, depending in some way upon ordinary laws of nature, and capable of imitation, to some extent, by human means. Yet, while we now predict eclipses with considerable accuracy, we have thus far obtained very little power of prediction with respect to thunder, although we are in hopes of more. The fall of aerolites, and the occurrence of showers of shooting stars, are at the present day explained

by hypotheses which deserve to be called exploratory, since, in some slight degree, they furnish bases for prediction. But it is not very long since men were in doubt whether to reject the evidence by which the fall of an aerolite was asserted, or to regard the occurrence as miraculous. In general, we observe a tendency in mankind to accept at first some hypothesis of personal agency as an explanation of any strange event, and subsequently, when it has been repeated often enough, to attempt to bring it under some classification which will permit its future occurrence to be predicted. If the attempt is even partially successful, the reference to personal agency becomes less satisfactory, and is ultimately dropped.

While the actions of large masses of men can to some extent be predicted from what are called laws of human nature, the action of any one person under given circumstances can only be foretold if his character is much better known than is usually possible. This probably strengthens the tendency just noticed to refer unusual occurrences, the repetition of which we are unable to predict, to some individual agency which we may suppose to be as capricious as we choose. But a hypothesis

which does not help us to predict anything is merely explanatory, whether it is natural or not. Now some minds may, and in fact do, prefer to dispense with hypotheses of this kind. Others insist upon some explanation, even if it needs another explanation to explain it. To use the terms of an Eastern superstition, their world must be supported by an elephant, and the elephant perhaps by a tortoise. By this time the imagination may be sufficiently fatigued to acquiesce in an agnosticism to which recourse might equally well have been taken at the outset.

An exploratory hypothesis may be serviceable in retracing past history as well as in foretelling the future; but in this case it cannot be verified by direct observation.

XXV

One hypothesis available for the explanation of testimony to the occurrence of anything unusual is the intentional or unintentional falsity of that testimony itself. I have had occasion, in my eighth essay, to notice the possibility of a hypothesis according to which we are always dreaming; and part of our apparently waking life may at all events be a dream.

It is obvious that a dream can be so called only after a decision that the sensations of which it consists do not indicate the occurrence of external events. How such decisions are actually reached, and how far they may be justified, are questions scarcely to be determined at present.

We already have some reason to think that delusions of the senses may simultaneously affect more persons than one. But if all the witnesses to an event agree in their accounts of it, we have no means at present of proving them to be wrong. We may, however, disbelieve their statements without doubting their honesty.

In every case in which testimony is accepted, a predisposition to accept it must exist. In an ordinary trial for murder, the evidence presented would make no impression upon jurymen who were not previously fully satisfied that it is practicable for one man to be killed by another. When any event is reported which seems apart from the ordinary course of nature, those who attribute it to the personal agency of others than ordinary human beings must already feel tolerably sure that such an agency is credible. They may assert

that their belief depends upon a long course of experience, such as determines the belief of every one in the most familiar natural laws. But the very fact that the reported events are unusual, so far as the mass of mankind are aware, shows that many hearers of the supposed testimony cannot have minds really prepared to receive it.

Historically, as we have seen, men in general did begin with a predisposition to think that any event not perfectly familiar should be referred to personal agency. This predisposition has actually diminished with the course of time. It is conceivable that it may recur, but this will require the reversal of a process which has been going on for ages. If this process continues without reversal, it is to be expected that events now seeming inexplicable will be brought under classifications which will enable men to determine the conditions under which they occur.

At the present time, we are offered a number of hypotheses for the explanation of alleged occurrences, in support of which much testimony is presented. First, the testimony may be false, intentionally or not; second, unconscious mental operations on the part of

human beings, carried on under unknown laws, may occasion results which appear to us unaccountable; third, spirits formerly inhabiting human bodies, and recollecting their lives in that state, may voluntarily, or by force of magic, intervene in our affairs; fourth, other spirits, of a benevolent or malevolent nature, able to observe what goes on among us, and thus acquiring a knowledge of our doings and thoughts, may choose to make use of this knowledge to our perplexity; fifth, direct divine intervention may be invoked to account for a certain part of the strange events, and this part may then be called miraculous.

Now all these are explanatory hypotheses in the sense that at present they form no good basis for prediction. Those of us, therefore, who do not feel the need of an immediate explanation for everything that may happen, will be disposed to keep their minds in suspense, and adopt no hypothesis at all. The case would be different if any need of immediate action with regard to a strange event should present itself; but this seems unlikely. We may leave the investigation of such subjects to others who take an interest in them, and are willing to run whatever risk to sanity may be involved in their inquiries.

XXVI

Among the hypotheses above mentioned, that relating to unconscious mental operations seems most likely to lend itself ultimately to ordinary scientific inquiry. In an age of wireless telegraphy, it is somewhat more credible than in former times that mental activity may so extend itself as to influence thought at a distance in a mind attuned, so to speak, to the reception of such an influence. In my second essay, I noticed this topic only to dismiss it as immaterial at the moment; and although it has here been brought more distinctly before us, it must still be left to very different inquirers to rescue, if they can, from unconsciousness any form of transmissible mental energy. The present method of examining the question seems to be that of suspending conscious activity rather than heightening it; and this method does not commend itself to my judgment, although I am unable to suggest a better one.

As to unusual physical events, such as movements of material objects, said to be due to the will of human beings or of spirits invoked to assist them, we may very well decline to take

an interest in such matters until some practical use can be made of them. When furniture can be conveyed from one house to another, without the assistance of wagons and of laborers, the public will undoubtedly be disposed to avail itself of such conveniences for moving, and the scientific world will find much interest in the investigation of the laws according to which the work is done.

It may now be worth while to repeat that hypotheses do not originate in evidence, but in imagination. Evidence may prove the availability of a hypothesis as a means of prediction; but this must not be evidence of isolated facts, but of recurring events open to general observation, or else of events capable of reproduction at pleasure by experiment, however rarely they may present themselves at other times. The experiment, moreover, must be one which an ordinary investigator can undertake, not one demanding the agency of peculiarly gifted persons. It is true that a new investigation may require a specially capable investigator; but until he has made it accessible to repetition by ordinary people, he has not yet succeeded in obtaining his intended addition to knowledge.

Evidence of particular occurrences can be accepted only when it is in accordance with the fundamental hypotheses prevalent at the time and place where the evidence is offered. Trials for witchcraft are not undertaken in our time at Salem or Boston, because the hypothesis of witchcraft is not as prevalent among us as it was among our ancestors. Whatever belief we can find which will comply with the old theological requirement of acceptance at all times and places, and by all men, will undoubtedly serve as a basis for evidence of special facts. In the absence of such belief, no testimony can be a rational warrant for its formation.

Still, testimony may give rise to belief, because, as we have seen, men are prone to call for an explanation of whatever happens or is said to happen. This tendency has been useful in setting real investigation on foot, and therefore should not be absolutely condemned. But history has repeatedly shown us that great evils may result from explanations which merely explain, without leading to general laws available for definite predictions.

XXVII

COMMUNICATIONS purporting to be received from the spirits of deceased human beings may, as just stated, be variously explained; and until they prove to be much more frequent, and much more valuable, than they are hitherto understood to have been, we need not concern ourselves with them in any discussion which we may undertake of the doctrine of human immortality in general. This doctrine is well known to be agreeable to many, perhaps to most, of the human species, and repulsive to some. What is here to be said of it will relate chiefly to its meaning rather than to its value or truth.

Whatever view may be taken of the soul; whether we are to regard it as something apart from the events which compose its consciousness, or merely as a condensed expression descriptive of those events, it seems pretty clear that the events, and not the permanent substance underlying them, are the subject of the ordinary man's contemplation when he anticipates a renewal of his existence after his present life is concluded. If he expects neither happiness nor misery, neither the sense of

activity nor the sense of rest, he can scarcely be said to expect any future life at all. It will be needless, therefore, to return in this place to the obscure subject of mind and matter, already considered in the early essays of the present series.

Our present conceptions of what we call evolution make us regard as good, in a special sense of that word, whatever tends to prolong existence, as has already been noticed in my twenty-second essay. It is natural, then, that a life after death should so frequently be regarded as desirable. Moreover, while our experience of life makes both good and evil appear as its inevitable accompaniments, we can easily conceive them as less intimately mingled than we have found them. Imagination readily presents to us the good as hereafter the exclusive possession of ourselves and our friends, while we assign the evil to our enemies, or to unknown persons with whom we have comparatively little sympathy. This view of a future life, once, apparently, very vivid and almost universal, while it still exists, is not now made as prominent as of old, even among those by whom it is formally avowed; and we shall have no space here for further discussion of it.

Belief in another life than ours does not necessarily include any connection by memory between two successive existences. We can imagine the two series of events as intimately connected with each other, one directly depending upon the other, and beginning where it ends, without being consciously united with it. A stone, thrown into the air, may simply fall upon the ground, and the shock thus given may distribute itself through nature at large; or the falling stone may occasion the explosion of a cartridge and the flight of a bullet, so that a particular series of events results from that previous series called the flight of the stone. A similar view of successive existences seems to satisfy some minds, while others insist upon a definite connection by memory between one life and the next.

This connection, however, may be extensive or slight, as we choose to regard it, so that no clear distinction can be drawn between the two theories just mentioned. Believers in the transmigration of souls are usually content with very little, if any, remembrance of former lives, but often claim to know something of them. Thus Pythagoras is said to have asserted his possession of some recollection of the

deeds of Euphorbus, including, probably, the discreditable share of that warrior in the death of Patroclus, by which alone the epic world is acquainted with him. Most people, in contemplating a future life, require for the preservation of personal identity a more complete retention of their connection with the past, and some insist upon a memory much more complete and minute than that which they have in their present existence.

If a man feels, of course without daring to assert, that he is himself the really important feature of the universe, and that everything else depends on his preservation, he will naturally also feel it highly necessary that his life should be maintained. But if, not merely in words, but in actual feeling, he holds the existence of other human beings to be as real as his own, it becomes of comparatively little moment to him whether what is to happen in a remote future concerns him personally or any of his neighbors. The immediate future, certainly, about which there is no time for reflection, must always present itself to him as his own affair; the constitution of nature has sufficiently provided for that, as it has also provided for our tendency to consider this

immediate future, for action in which we must now prepare, as more important than the past. But the case is altered as soon as time is allowed for the operation of reason. If the past has been of real importance, we may say with Goethe's Egmont, "Ich höre auf zu leben; aber ich habe gelebt." In any case, the present and visible welfare or misfortune of a friend affects the ordinary man more powerfully than the possibility, or even the expectation, of a similar experience of his own at any considerable interval of time.

The future extinction of the entire human race is also regarded without abhorrence by any one who is fully persuaded of the probability that the universe will still go on very well without us, even if no other races, some of them, at least, more fortunate than ours, should then be in existence in some portion of space. The local existence of the mind was noticed in my sixteenth essay; we do not now, either as individuals or as a race, live everywhere; and if we accept this fact with composure, we have no good reason for finding anything formidable in the thought that we may not always exist, whatever we may believe upon the subject. The feeling that we

have not always existed; that we were nowhere in the present when that present included the reign of David or of Cyrus, is perhaps as disagreeable, when distinctly brought before the mind, as the anticipation of a time when, as Dante[1] says, we shall be the ancients ourselves. But if disagreeable to the instinct, neither feeling survives the examination of reason.

XXVIII

Having already so nearly approached the subject of religion, we shall naturally be led to consider it more directly. How to do so with due regard to the feelings of devout men, which deserve the highest respect and the most sincere appreciation, is always a difficult problem to those in whom such feelings are much less acute, if not wholly wanting. To admit their absence is not to condemn their presence in other minds, or to endeavor to destroy them where they exist; and certainly no attempt of that kind is here intended.

In believing in the existence of beings superior to themselves, men have always been unable to imagine these beings except as human in general character and attributes. No-

[1] *Paradiso*, xvii, 120.

thing absolutely foreign to humanity can be conceived by a human mind; and it is even difficult for such a mind, as already noticed, to imagine itself or anything like it separated from the body which here always contains it. Accordingly, we find a belief in incarnations generally attending a belief in deities; and, in like manner, the doctrine of a future life for men themselves has been very widely held to include a reconstructed body as well as an imperishable spirit.

We will not stop to consider those forms of religion which concern themselves mainly with beings as malevolent as they are powerful, whose ill-will must be averted, if possible, by prescribed ceremonies. Let us rather proceed at once to the most lofty conception which men have been able to form of an omnipotent and omnipresent Deity, who loves and protects his creatures, and yet permits them to be afflicted by evils for the existence of which no satisfactory explanation has been imparted to them.

This omnipotent Creator cannot be at once human and humane, according to the ordinary use of language; and nothing can be gained by adopting a form of words the meaning of which

has been perverted. One method of accounting for the existence of what we consider evil has been to question the absolute omnipotence of the Deity, and to suppose an impersonal Fate as in supreme control; a second method has been to exalt the importance in the universe of human intentions, and to assert that freedom of choice must imply error and evil results in some cases at least; but even when this explanation is adopted, it must be felt that such a scheme, like the first, involves a limitation of omnipotence. A third idea, that all beings but one must be imperfect, has also been regarded as an explanation of the existence of evil; but imperfection, of knowledge for instance, is not necessarily evil in the customary sense of the word.

Agnosticism, as it has been called in recent times, avoids this difficulty by denying the possibility of a human conception of what is necessarily superhuman. In this view, omnipotence remains unimpaired, but little opportunity is left for the exercise of love and worship. A partial escape from this result is afforded by the possibility that Infinity may include finite qualities, and that, as man's physical constitution has something in common

with that of the lowest animals, so his mental constitution may be distantly related to some part, though not the supremely controlling part, of a Mind the more important operations of which he is wholly incompetent to conceive. But it may be doubted whether this theory differs materially from the older distinction between Fate and a Deity of human nature, not absolutely omnipotent.

Belief in any Deity must depend mainly upon intuition. As a natural and unavoidable part of many minds, it occupies an impregnable position. When men attempt to support it by argument, they are likely to succeed only in undermining it. The argument from design, once more popular than at present, is unsatisfactory because design is the attribute of an imperfect creature, controlled by laws of nature to which he must adjust his plans. There is something undignified in the idea of puzzles with ingenious solutions contrived by Omnipotence for the purpose of impressing natural religion upon mankind; and even this purpose, when thus indirectly carried out, seems unfit to be attributed to a Creator. Teleology, indeed, became more respectable than before when the gradual adjustment of

everything to the circumstances in which it is placed became a generally accepted idea. Even now, however, it still appears to many of us unsatisfactory as a proof of the divine government of the world, however interesting as a theory of the possible form of that government.

The argument for the existence of a Deity with human attributes which is founded upon the sense of duty has certainly more dignity than that based upon design; but it requires a different conception of the moral law than that considered preferable in my twentieth essay.

XXIX

Assuming the existence of a Deity, are we to expect the appearance of miracles and special providences? This expectation has been regarded in my twenty-fifth essay as a requisite for the reception of testimony concerning such events. The answer to our question depends upon our conception of the divine character and attributes. Those who insist most strongly upon an analogy between the divine nature and that of humanity will presumably be the readiest to believe in a Providence revealing itself by special interpositions in human affairs; others, with a greater faith in the

omnipotence and infinity than in the human nature of their Deity, will prefer to regard the general course of events, uninterrupted by any such irregularities, as the true mark of divine action. They will consider miracles, if they admit their occurrence, rather as events to be explained by revelation than as evidence in its favor. Special providences they will consider unworthy of the grandeur with which their feelings invest the Supreme Being. To what extremes the opposite view may carry us is apparent in Newman's conception of direct divine agency in freezing the fingers of thousands of unfortunate conscripts, exposed much against their own will to the rigor of a Russian winter, in order that the excommunication of Napoleon might take effect in a manner suggested in scorn by Napoleon himself.[1]

An ancient protest against such a view of Providence is embodied in the book of Job. Eliphaz, Bildad, and Zophar, for maintaining the doctrine of special providences in an extreme form, are adjudged guilty of impiety, while Elihu is dismissed without blame, but apparently with contempt, not for an unworthy

[1] *Grammar of Assent*, p. 417.

conception of his Maker, but for attempting to justify the doings of the Almighty, who needs no human defence or approval, and to whose government no human standard of morality is to be applied. St. Paul, in his simile of the potter, afterwards took much the same attitude. Although, in this passage, he seems to strain the meaning of Hosea in order to make a plea for the preference of some Gentiles to some Jews, he would perhaps hardly have imagined that in later times his commentators would strain his expressions to support extreme Calvinistic doctrines.

Men of an agnostic temperament are inclined to insist still more strongly upon the unlikeness of the Infinite to any finite creature. To them, the exaltation of humanity to omnipotence, however sublime an idea, appears presumptuous. They will readily admit that such beings as men are not the most important part of the universe, and will add that they are too unimportant to have the least comprehension of what is beyond them. An earthworm, presumably, has no notion whatever of men, with whom he is brought into relation only by what men, under analogous circumstances, might call convulsions of nature. Now

there may be a difference of opinion as to whether there is an actually infinite distinction between the consciousness of the man and that of the worm. If there is, the case may be compared to that of the distinction between a Deity and man; if not, this last distinction is infinitely the greater. It is rather by additional assertion than by denial that the agnostic differs from the theist.

It is generally admitted that evidence for a revelation of any kind demands for its reception some previous foundation in natural religion. The consideration of revealed truth must therefore be left to those in whose minds such a foundation exists. Butler, in his celebrated Analogy, attempted to show that there was no objection to the acceptance of a revelation which might not equally be urged against simple Deism; but his success has often been thought to have consisted rather in disproving Deism than in opening the way for revelation.

XXX

In general, and independently of any reference to revelation, we may regard possible philosophic opinions as divided into three prin-

cipal classes. We have, first, the condition of universal doubt, which, as Montaigne[1] cleverly says, is better expressed by an interrogation than by an assertion. Secondly, there may be a belief in the reality of events, including the unknown events of the external world, in which are again included the mental operations of external minds; while, combined with this belief, there may be a distrust of explanatory hypotheses, and a disposition to acquiesce in ignorance of all beyond a limited range of knowledge. Thirdly, and perhaps most frequently, we have the more enthusiastic temper, with a faith in things not seen, and sometimes with a disbelief of things seen, as for example the negation of the real existence of material objects, while at the same time the reality of other minds may be vigorously asserted. No argument can be employed to maintain the position occupied by either of these classes, or to attack that held by another; for no common ground from which to set out upon such a discussion is available.

Men of the third class are frequently disposed to employ ordinary words in new senses, as for example by denying pain to be an evil, with

[1] *Essais*, Tome II, chap. xii (p. 237).

some of the ancients, or calling it a delusion, with some of the moderns; or by insisting on the benevolence of the government of the universe, although its results are not those of benevolence in the ordinary meaning of the word. If such expedients actually pacify and gratify the minds of those who resort to them, they are certainly justified by their results; but many men find them ineffectual, and are apt to regard them as childish. These men are mostly of the second type; in old times, they might often call themselves Epicureans. Although that name acquired a bad reputation in a later age, there is still no reason for disclaiming it at the present day, when employed in its proper sense. The true doctrines of Epicurus, so far as I can judge, might easily have led in the course of time to a philosophic system agnostic in theology, utilitarian in morals, and positive in science, if we use this last term to denote a disposition to study trains of events rather than permanent substances. Epicurus himself probably had little or no appreciation of the distinction between explanatory and exploratory hypotheses, or of the unlimited possibilities of gratification afforded by the latter. But even in his alleged rejection

of physical science as futile, since in his opinion things were as they appeared to be, he was really insisting on the importance of phenomena, and to that extent was nearer the attitude of many modern men of science than were his more fanciful opponents. It should be needless to add that the astronomers and other students of nature in ancient times, when they inquired into trains of events instead of into the substances supposed to underlie them, really pursued the same methods of research which prevail among their present successors. They did not have to wait for any Bacon to show them how to reason inductively, or how to verify an interesting supposition.

In intolerant times, we hear little of Epicureans, since there is nothing in their principles which urges them to martyrdom or to proselytism; but under whatever name, or without any, they have probably always been fairly numerous. So they are, I suppose, at the present day, though they may be afraid of the old name of their sect. Yet many of us are still ready to join with Lucretius[1] in respect for the memory of the man who was foremost in defiance of traditional prejudices, and

[1] *De Rerum Natura*, i, 62.

led the way to a view of nature controlled by reason, and undistorted either by the embellishments of fancy or by the aggravations of superstition.

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